The *Rhea Americana*, with intestines equally long, has a gizzard so placed, that no part of the food can escape trituration.

And lastly, the Ostrich of Africa, where its means of subsistence are most precarious, has a gizzard extremely strong, and intestines seventy feet in length.

Additional Remarks on the State in which Alcohol exists in fermented Liquors. *By* William Thomas Brande, *Esq. F.R.S.* Read December 17, 1812. [*Phil. Trans.* 1813, *p.* 82.]

The question here discussed, is whether alcohol exists in fermented liquors ready formed as the result of fermentation, or is formed subsequently from them by the process of distillation. The latter the author has imagined to be the commonly received opinion; and in a preceding communication to the Society he endeavoured to refute it, by showing that the same quantity of alcohol was always obtained, whether the distillation was performed at a higher or lower temperature. Since the conclusions which he then drew may be objected to on the ground that even the lowest temperature that he employed for distillation might be sufficient to give a new arrangement to the elements, and thereby form alcohol, he now employed a totally different process, in which distillation is altogether avoided.

Having observed that the unsuccessful attempts which had been made to separate alcohol from wines by subcarbonate of potash, and from which some persons had inferred its non-existence, appeared to fail in consequence of the union of the alkali with the colouring, extractive, and acid matters contained in the liquor, the author endeavoured, and has succeeded, in effecting a previous separation of these substances from wine, by means of subacetate of lead, or subnitrate of tin.

When these are added, a dense and copious precipitate is instantly formed; and if the liquor be then filtered, it passes perfectly colourless, containing alcohol, water, and a portion of the acid of the metallic salt employed.

By adding to this liquor half its quantity of subcarbonate of potash, nearly the whole of the alcohol that was contained in the wine is separated.

In Port wine thus treated, the quantity of alcohol was found to be $22\frac{1}{2}$ per cent., agreeing very nearly with former results by distillation.

To these inferences respecting the apparent proportion of alcohol in Port and in other wines, it has been objected, that they do not possess a power of intoxicating equal to such a mixture of alcohol and water.

Mr. Brande's reply to this objection is, that it requires some time for a mixture of alcohol and water to become incorporated; and that in this state of imperfect union it is warmer to the taste, and apparently more heating in its effects than when sufficient time has been allowed for their mutual penetration.